

WHAT IS CLAIMED IS

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1. An optical pickup apparatus for accessing an optical recording medium, comprising:

20 a light source unit emitting one of a plurality of laser beams having different wavelengths, the light source unit including a first laser diode emitting a laser beam having a first wavelength and a second laser diode emitting a laser beam having a second wavelength;

25 an optical system focusing said one of the plurality of laser beams, emitted by the light source unit, onto a recording surface of the recording medium;

a photodetector unit receiving reflection beams, which are reflected from the recording medium in response to said one of the plurality of laser beams focused by the optical system, to generate detection signals from the received reflection beams; and

30 a holographic unit having a first hologram suited to the first laser diode and a second hologram suited to the second laser diode, the first hologram provided to diffract a reflection beam of the laser beam of the first laser diode to the photodetector, the second hologram provided to diffract a reflection beam of the laser beam of the second laser diode to the photodetector.

2. The optical pickup apparatus according to claim 1 wherein the photodetector is provided to receive the diffracted beams from each of the first hologram and the second hologram.

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3. The optical pickup apparatus according to claim 1 wherein one of the first and second holograms in the holographic unit includes a first tracking detection region suited to the reflection beam of the laser beam of the first laser diode, and a second tracking detection region suited to the reflection beam of the laser beam of the second diode, and a surface area of the second tracking detection region being larger than a surface area of the first tracking detection region.

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4. The optical pickup apparatus according to claim 1 wherein the first hologram and the second hologram of the holographic unit are provided in a single optical module.

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5. The optical pickup apparatus according to claim 4 wherein the first hologram and the second hologram are arranged with a spacing between opposing surfaces of the first and second holograms.

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6. The optical pickup apparatus according to claim 1 wherein the first hologram and the second hologram of the holographic unit are respectively configured into a first polarizing hologram and a second polarizing hologram.

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7. The optical pickup apparatus according to claim 6 wherein a focusing detection region of each of the first and second polarizing holograms has an optimum grating depth to provide a predetermined diffraction efficiency for one of the laser beam wavelengths of the first and second laser diodes.

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8. The optical pickup apparatus according to claim 6 wherein

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a light source unit emitting one of a plurality of laser beams having different wavelengths, the light source unit including a first laser diode emitting a laser beam having a first wavelength and a second laser diode emitting a laser beam having a second wavelength;

an optical system focusing said one of the plurality of laser beams, emitted by the light source unit, onto a recording surface of an optical recording medium;

a photodetector unit receiving reflection beams, which are reflected from the recording medium in response to said one of the plurality of laser beams focused by the optical system, to generate detection signals from the received reflection beams; and

a holographic unit having a first hologram suited to the first laser diode and a second hologram suited to the second laser diode, the first hologram provided to diffract a reflection beam of the laser beam of the first laser diode to the photodetector, the second hologram provided to diffract a reflection beam of the laser beam of the second laser diode to the photodetector.

15. An optical pickup apparatus for accessing an optical recording medium, comprising:

a light source unit emitting one of a plurality of laser beams

having different wavelengths, the light source unit including a first laser diode emitting a laser beam having a first wavelength and a second laser diode emitting a laser beam having a second wavelength;

5 an optical system focusing said one of the plurality of laser beams, emitted by the light source unit, onto a recording surface of the recording medium;

10 a photodetector unit receiving reflection beams, which are reflected from the recording medium in response to said one of the plurality of laser beams focused by the optical system, to generate detection signals from the received reflection beams; and

15 a holographic unit having a first holographic pattern suited to the first laser diode and a second holographic pattern suited to the second laser diode, the first hologram provided to partially diffract a reflection beam of the laser beam of the first laser diode to the photodetector, and the first laser reflection beam partially passing through the first holographic pattern to the photodetector, the second hologram provided to partially diffract a reflection beam of the laser beam of the second laser diode to the photodetector, and the second
20 laser reflection beam partially passing through the second holographic pattern to the photodetector.

16. The optical pickup apparatus according to claim 15 wherein the photodetector is provided to receive the diffracted beams from each of the first holographic pattern and the second holographic pattern of the holographic unit.

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17. The optical pickup apparatus according to claim 15 wherein at least the first laser diode and the second laser diode of the light source unit are provided in a single optical module.

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18. The optical pickup apparatus according to claim 15 wherein at least the first laser diode and the second laser diode of the light source unit and the photodetector unit are provided in a single optical module.

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19. The optical pickup apparatus according to claim 15 wherein the optical system includes a collimator lens converting the

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laser beam, received from each of the first laser diode and the
second laser diode, into a collimated laser beam, and a beam splitter
transmitting the collimated laser beam to the recording medium and
reflecting the reflection beams from the recording medium to the
5 photodetector unit.

10 20. The optical pickup apparatus according to claim 15
wherein the holographic unit is configured into a polarizing
hologram having the first holographic pattern and the second
holographic pattern.

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21. The optical pickup apparatus according to claim 20
wherein the each of the first holographic pattern and the second
20 holographic pattern of the polarizing hologram contains an obliquely
deposited film.

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22. The optical pickup apparatus according to claim 20 further comprising a quarter-wave plate provided between the holographic unit and the optical system, and the quarter-wave plate being configured to have a tolerance of phase difference of the reflection beams for the first and second laser diodes in a range of 90 ± 19 degrees.

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